

LISTING OF THE CLAIMS

The following is a complete listing of all the claims in the application, with an indication of the status of each:

- 1     1. (Currently amended) A method of purchasing products and services over a network  
2     comprising the steps of:  
3         submitting a Request for Quotation (RFQ) with a plurality of attributes over the  
4     network;  
5         receiving at least one bid in response to the RFQ over the network, each of the at  
6     least one bid having a plurality of attribute values associated therewith; and  
7         creating a graphical visual interface based on a ~~Cartesian~~ parallel coordinate  
8     system, the graphical user interface showing a relationship in a graphical format between  
9     the plurality of attributes and the at least one bid and associated attribute values in a  
10    single display, said graphical visual interface permitting user interaction.
- 1     2. (Previously presented) The method of claim 1, further comprising the steps of:  
2         providing a form for entering the RFQ and a plurality of attributes; and  
3         providing a form for entering the at least one bid and the plurality of attribute  
4     values.
- 1     3. (Original) The method of claim 2, further comprising the step of submitting the RFQ  
2     form and the bid form over the network to a web server.
- 1     4. (Original) The method of claim 3, wherein the RFQ form and the bid form are web  
2     pages which allow a buyer and a seller to input one or more data values for one or more  
3     data categories.

1 5. (Previously presented) The method of claim 4, wherein the data categories include the  
2 plurality of attributes, the plurality of attribute values or a business condition submitted  
3 with the at least one RFQ.

1 6. (Previously presented) The method of claim 1, wherein the plurality of attribute  
2 values are values of price, quantity, volume discount policy, material quality, product  
3 quality ratings, merchant reputation, warranty, support, tax, delivery time, and/or delivery  
4 cost.

1 7. (Previously presented) The method of claim 1, further comprising the step of storing  
2 the RFQ and the plurality of RFQ attributes and the at least one bid and plurality of  
3 attribute values in a database.

1 8. (Previously presented) The method of claim 1, further comprising the step of  
2 providing business conditions with the RFQ, the business conditions being one or more  
3 constraints for values associated with the plurality of attributes.

1 9. (Previously presented) The method of claim 8, wherein the business conditions  
2 further include one or more relationships among the plurality of attribute values and the  
3 plurality of RFQ attributes.

1 10. (Original) The method of claim 8, further comprising the steps of:  
2 providing at least one bid line representative of connected attribute values  
3 displayed on the graphical visual interface and responsive to the business conditions;  
4 filtering the business conditions in order to eliminate one of the at least one bid  
5 line which does not meet one or more of the business conditions.

- 1 11. (Previously presented) The method of claim 1, further comprising the step of  
2 providing at least two attribute lines and one bid line, wherein:  
3 each of the attribute lines represents respectively one of the plurality of attribute  
4 values, the attribute lines are parallel and equally-spaced; and  
5 the one bid line represents connected attribute values positioned on the each of the  
6 attribute lines and associated with a bid of the at least one bid.
- 1 12. (Original) The method of claim 11, further comprising the step of filtering out an  
2 attribute line of the attribute lines or the one bid line from the graphical visual interface.
- 1 13. (Original) The method of claim 11, further comprising the step of filtering out a  
2 portion of the one bid line from the graphical visual interface.
- 1 14. (Previously presented) The method of claim 1, further comprising the step of  
2 filtering out an attribute value of the plurality of attribute values from the graphical visual  
3 interface.
- 1 15. (Original) The method of claim 1, further comprising the step of filtering out  
2 dominated bids associated with the at least one bid from the graphical visual interface.
- 1 16. (Previously presented) The method of claim 15, wherein the dominated bids have  
2 plurality of attributes each having a value not exceeding a value of a corresponding  
3 attribute of another bid.
- 1 17. (Previously presented) The method of claim 1, further comprising an attribute line  
2 reordering operation and an attribute value range adjust operation associated with the  
3 plurality of RFQ attributes and the attribute values.

1 18. (Previously presented) The method of claim 17, wherein the attribute line reordering  
2 operation changes an order of attribute lines associated with the plurality of attributes. .

1 19. (Previously presented) The method of claim 18, wherein the attribute value range  
2 adjust operation changes a range of attribute values associated with the plurality of  
3 attribute values.

1 20. (Currently amended) A system for purchasing products and services over a network  
2 comprising:  
3 means for submitting a Request for Quotation (RFQ) with a plurality of attributes  
4 over the network;  
5 means for receiving at least one bid in response to the RFQ over the network, each  
6 of the at least one bid having a plurality of attribute values; and  
7 means for creating a graphical visual interface based on a Cartesian parallel  
8 coordinate system showing a relationship in a graphical format between the plurality of  
9 attributes and corresponding attribute values in a single display, said graphical visual  
10 interface permitting user interaction.

1 21. (Previously presented) The system of claim 20, further comprising means for  
2 filtering from the graphical visual interface one of the plurality of attribute values and the  
3 RFQ value.

1 22. (Original) The system of claim 20, further comprising:  
2 means for providing at least one bid line representative of connected attribute  
3 values displayed on the graphical visual interface;  
4 means for filtering at least one of the bid line or a portion thereof.

1 23. (Original) The system of claim 22, further comprising means for providing attribute  
2 lines representative of the at least one RFQ attribute.

1 24. (Original) The system of claim 23, further comprising:  
2 means for placing attribute values associated with the submitted bid on respective  
3 attribute lines; and  
4 means for providing a bid line spanning between the attribute lines, the bid line  
5 connecting the attribute values located on the respective attribute lines.

1 25. (Previously presented) The system of claim 24, further comprising:  
2 means for reordering the attribute lines; and  
3 means for adjusting an attribute value range associated with the plurality of  
4 attributes.

1 26. (Currently amended) A machine readable medium containing code for purchasing  
2 products and services over a network, the code implementing the steps of:  
3 submitting a Request for Quotation (RFQ) with a plurality of attributes over the  
4 network;  
5 receiving at least one bid in response to the RFQ over the network, each of the at  
6 least one bid having a plurality of attribute values; and  
7 creating a graphical visual interface based on a ~~Cartesian~~ parallel coordinate  
8 system, the graphical user interface showing a relationship in a graphical format between  
9 the plurality of attributes and the at least one bid and associated attribute values in a  
10 single display, said graphical visual interface permitting user interaction.

1 27. (Previously presented) The machine readable code of claim 26, further comprising  
2 the step of filtering from the graphical visual interface one of the plurality of attribute  
3 values and the RFQ attributes.

1 28. (Previously presented) The machine readable code of claim 26, further comprising  
2 the step of providing at least one bid line representative of connected attribute values of  
3 the plurality of attribute values.

1 29. (Previously presented) The machine readable code of claim 26, further comprising  
2 the step of providing attribute lines representative of the plurality of RFQ attributes.

1 30. (Original) The machine readable code of claim 29, further comprising the steps of:  
2 placing attribute values associated with the submitted bid on respective attribute  
3 lines; and  
4 providing a bid line spanning between the attribute lines, the bid line connecting  
5 the attribute values located on the respective attribute lines.

1 31. (Previously presented) The machine readable code of claim 30, further comprising  
2 the steps of :  
3 reordering the attribute lines; and  
4 adjusting an attribute value range associated with the plurality of attribute values.

1 32. (Previously presented) The method of claim 1, wherein said graphical visual  
2 interface permitting user interaction allows the filtering out of an attribute line of the  
3 attribute lines or the one bid line from the graphical visual interface.

1 33. (Previously presented) The method of claim 1, wherein said graphical visual  
2 interface permitting user interaction allows the filtering out of a portion of the one bid  
3 line from the graphical visual interface.

1 34. (Previously presented) The system of claim 20, wherein said graphical visual  
2 interface allows the filtering out of an attribute line of the attribute lines or the one bid  
3 line from the graphical visual interface.

1 35. (Previously presented) The system of claim 20, wherein said graphical visual  
2 interface allows the filtering out of a portion of the one bid line from the graphical visual  
3 interface.

1 36. (Previously presented) The method of claim 20, further comprising the step of  
2 filtering out an attribute value of the plurality of attribute values from the graphical visual  
3 interface.

1 37. (Previously presented) The method of claim 20, further comprising the step of  
2 filtering out dominated bids associated with the at least one bid from the graphical visual  
3 interface.

1 38. (Previously presented) The machine readable code of claim 26, wherein said  
2 graphical visual interface allows the filtering out of an attribute line of the attribute lines  
3 or the one bid line from the graphical visual interface.

1 39. (Previously presented) The machine readable code of claim 26, wherein said  
2 graphical visual interface allows the filtering out of a portion of the one bid line from the  
3 graphical visual interface.

1 40. (Previously presented) The machine readable code of claim 26, further comprising  
2 the step of filtering out an attribute value of the plurality of attribute values from the  
3 graphical visual interface.

1 41. (Previously presented) The machine readable code of claim 26, further comprising  
2 the step of filtering out dominated bids associated with the at least one bid from the  
3 graphical visual interface.

1 42. (Currently amended) A system for providing an interactive visualization and  
2 interface for displaying one or more Requests for Quotes and one or more submitted bids  
3 with one or more attributes and evaluating the said submitted bids for their merit, the said  
4 system comprising of:

5 database which provides one or more data models and a persistent store for one or  
6 more Requests for Quotes and one or more submitted bids with one or more attributes  
7 which are displayed in the said interactive visualization and interface;

8 RFQ input process which stores one or more RFQ data instances in the said  
9 database;

10 bid input process which stores one or more submitted bid data instances with one  
11 or more attribute values in the said database;

12 data preparation process which pre-processes and pre-computes the said RFQ and  
13 bid data for preparing for display and analysis in the said visual interface, data preparation  
14 including, but not limited to, cleansing, normalization, and aggregation;

15 data management process which provides a programming interface to the said  
16 database for accessing and manipulating the said RFQ and bid data stored in the database;

17 data rendering process which provides one or more RFQ rendering processes  
18 reading in one or more RFQ data, creating one or more visualization based on a ~~Cartesian~~  
19 parallel coordinate system, transforming the read RFQ data into points and lines in the  
20 said visualization, and displaying them on the said visualization;

21 data rendering process which, further, provides one or more Bid rendering  
22 processes reading on one or more bid data with one or more attribute values, transforming  
23 the read bid data and their attribute values into points and lines in the said visualization,  
24 and displaying them on the said visualization;



25 data control process which provides one or more data filter controls allowing the  
26 user to interactively filter the said RFQ data and the said bid data displayed in the said  
27 visualization;

28 data control process which, further, provides one or more data order controls  
29 allowing the user to interactively rearrange the order of one or more attributes displayed  
30 in the visualization;

31 data control process which, further, provides one or more data relation controls  
32 allowing the user to interactively discover the domination relationship among two or  
33 more submitted bids over one or more attribute values, and interactively display the said  
34 relationships in the said visualization by using the said data filter control; and

35 graphical visual interface which displays the said interactive visualization with  
36 one or more icons for activating and deactivating the said interactive data controls  
37 including, but not limited to, data filter controls, data order controls, and data relation  
38 controls, said graphical visual interface permitting user interaction.

1 43. (Previously presented) The system of claim 42, wherein said graphical visual  
2 interface allows the filtering out of an attribute line of the attribute lines or the one bid  
3 line from the graphical visual interface.

1 44. (Previously presented) The system of claim 42, wherein said graphical visual  
2 interface allows the filtering out of a portion of the one bid line from the graphical visual  
3 interface.

1 45. (Previously presented) The system of claim 42, further comprising the step of  
2 filtering out an attribute value of the plurality of attribute values from the graphical visual  
3 interface.

- 1 46. (Previously presented) The system of claim 42, further comprising the step of
- 2 filtering out dominated bids associated with the at least one bid from the graphical visual
- 3 interface.